

WHAT IS CLAIMED IS:

- 09986808.11301
1. A method for manufacturing an ink jet recording head provided with a recording elemental substrate having a discharge port group for discharging ink, an electric wiring substrate electrically connected with said recording elemental substrate, and a supporting member for holding and fixing said recording elemental substrate and said electrical wiring substrate, comprising the following steps of:
    - 10 injecting thermohardening filler into a filler retaining portion communicated with the sealing area requiring sealing;
    - filling said area with the thermohardening filler injected into said filler retaining portion by heating
    - 15 said filler to flow; and
    - hardening said filled thermohardening filler.
  2. A method for manufacturing an ink jet recording head according to Claim 1, wherein said
  - 20 sealing area is formed by said supporting member, said recording elemental substrate, and said electric wiring substrate.
  3. A method for manufacturing an ink jet
  - 25 recording head according to Claim 1, wherein said filler retaining portion is the opening portion arranged on the reverse side of the surface of said

supporting member for supporting said recording  
elemental substrate.

4. A method for manufacturing an ink jet  
5 recording head according to Claim 1, wherein said  
filler retaining portion is the stepping portion of the  
said supporting member for supporting said recording  
elemental substrate and said recording elemental  
substrate, and is the portion adjacent to one side face  
10 of said recording elemental substrate having no  
electrode terminals arranged therefor.

5. A method for manufacturing an ink jet  
recording head according to Claim 1, wherein a  
15 plurality of said recording elemental substrates are  
arranged in parallel.

6. A method for manufacturing an ink jet  
recording head according to Claim 1, wherein the  
20 heating temperature in said filler filling step is  
lower than the heating temperature in said filler  
hardening step.

7. A method for manufacturing an ink jet  
25 recording head according to Claim 1, wherein the  
heating temperature in said filler filling step is a  
temperature making the viscosity of said filler 15

09986808 11.301  
10E111 8029860

poise or less.

8. A method for manufacturing an ink jet recording head according to Claim 1, where the heating temperature in said filler hardening step is 80°C or more.

9. An ink jet recording head manufactured by a method for manufacturing an ink jet recording head according to Claim 1.

10. An ink jet recording apparatus provided with a carriage having mounted thereon an ink jet recording head according to Claim 9.

11. An ink jet recording head provided with a recording elemental substrate having a discharge port group for discharging ink, an electric wiring substrate electrically connected with said recording elemental substrate, and a supporting member for holding and fixing said recording elemental substrate and said electrical wiring substrate, comprising:

a filler retaining portion communicated with the sealing area requiring sealing.

12. An ink jet recording head according to Claim 11, wherein said filler retaining portion is the

09986608-11337

SUB  
A1

525  
70

opening portion arranged on the reverse side of the surface of said supporting member for supporting said recording elemental substrate and communicated with the area adjacent to the side face of said recording elemental substrate.

13. An ink jet recording head according to Claim 11, wherein sealing resin is filled from said filler retaining portion onto the circumference of said recording elemental substrate.

14. An ink jet recording head according to Claim 11, wherein said filler retaining portion is arranged toward the vicinity of the center of the reverse side of the portion electrically connecting said recording elemental substrate and said wiring substrate.

15. An ink jet recording head according to Claim 11, wherein said filler retaining portion is tapered thinner toward said recording elemental substrate.

16. An ink jet recording head according to Claim 11, wherein each of said filler retaining portions is arranged to be positioned on the sealing location on one side of said recording elemental substrate and on the sealing location on the side opposite to said location.

505  
11301  
(anti)

17. An ink jet recording head according to Claim 11, wherein said supporting member comprises a supporting plate provided with the opening portion for said recording elemental substrate to be in contact with said supporting member, being inclusively placed between said wiring substrate and said supporting member to hold and fix said wiring substrate; and a supporting substrate for holding and fixing said recording elemental substrate by being inclusively placed between said recording elemental substrate and said supporting member.

18. An ink jet recording head according to Claim 17, wherein said supporting substrate is provided with a communicating hole communicated from the said filler retaining portion arranged on the reverse side of said supporting member to a portion between said recording elemental substrate and said supporting plate.

19. An ink jet recording head according to Claim 15, wherein the diameter of the hole of said filler retaining portion tapered thinner toward the leading end thereof is substantially equal to the diameter of said communicating hole of the supporting substrate.

20. An ink jet recording head according to Claim 17, wherein a plurality of said communicating holes are

Sub  
080000  
(entd)  
FOETTY 111301

arranged to be communicated with said filler retaining portion.

21. An ink jet recording head according to Claim 17, wherein said communicating hole arranged for said supporting substrate is itself to become a filler retaining portion.

22. An ink jet recording head according to Claim 11, wherein said filler filling portion is a stepping portion of said supporting member for supporting said recording elemental substrate, and said recording elemental substrate, and is the portion adjacent to one side face of said recording elemental substrate having no electrode terminals arranged therefor.

23. An ink jet recording apparatus provided with a carriage having an ink jet recording head according to Claim 11 mounted thereon.

Sub  
B  
(encl.)  
FOI b7E b7C b7D  
111301